

No. 654,724.

Patented July 31, 1900.

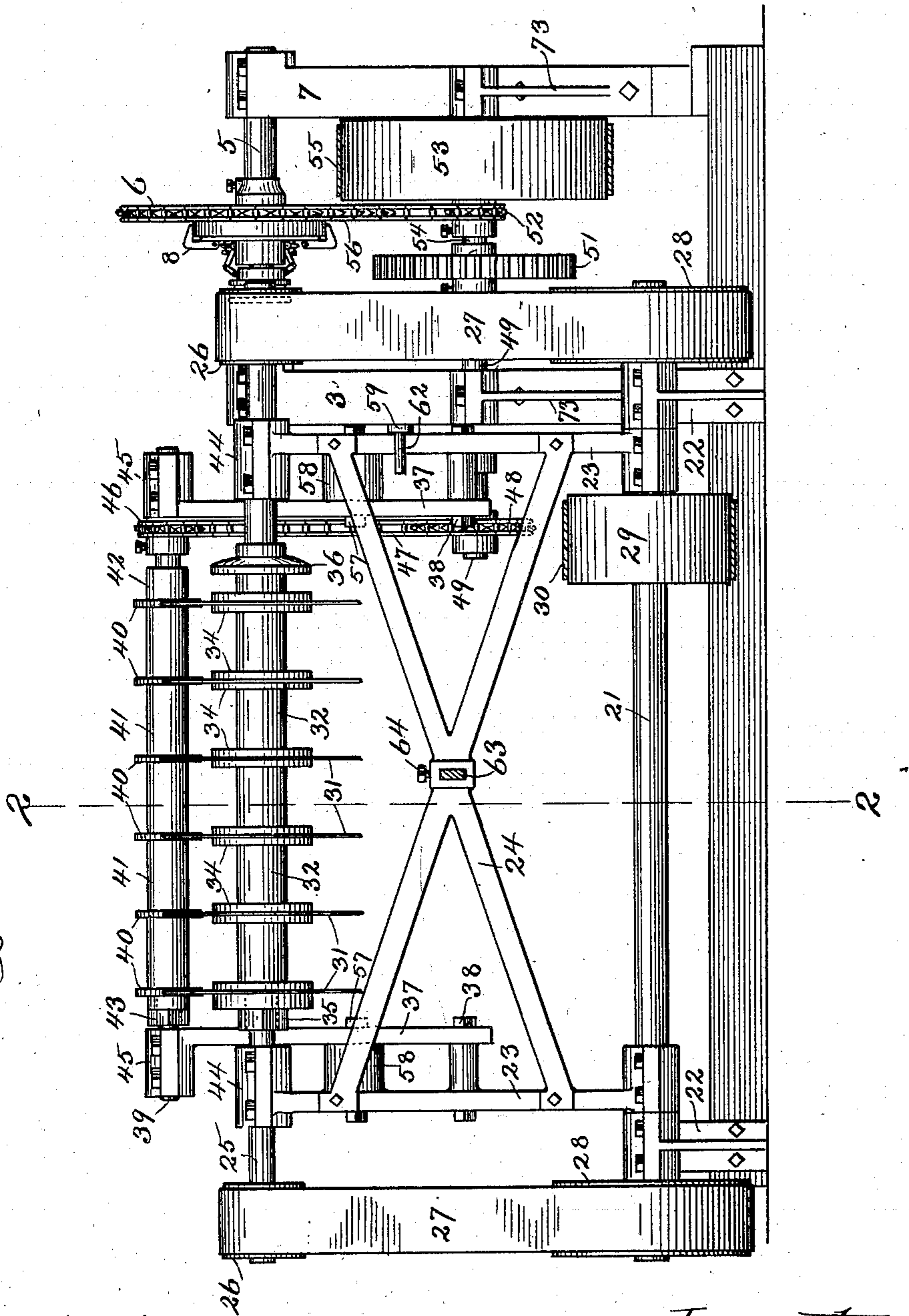
G. A. GAGE.  
VENEER PACKAGE DIVIDER.

(Application filed May 31, 1900.)

(No Model.)

3 Sheets—Sheet 1.

*Fig. 1.*



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George A. Gage  
By *[Signature]*  
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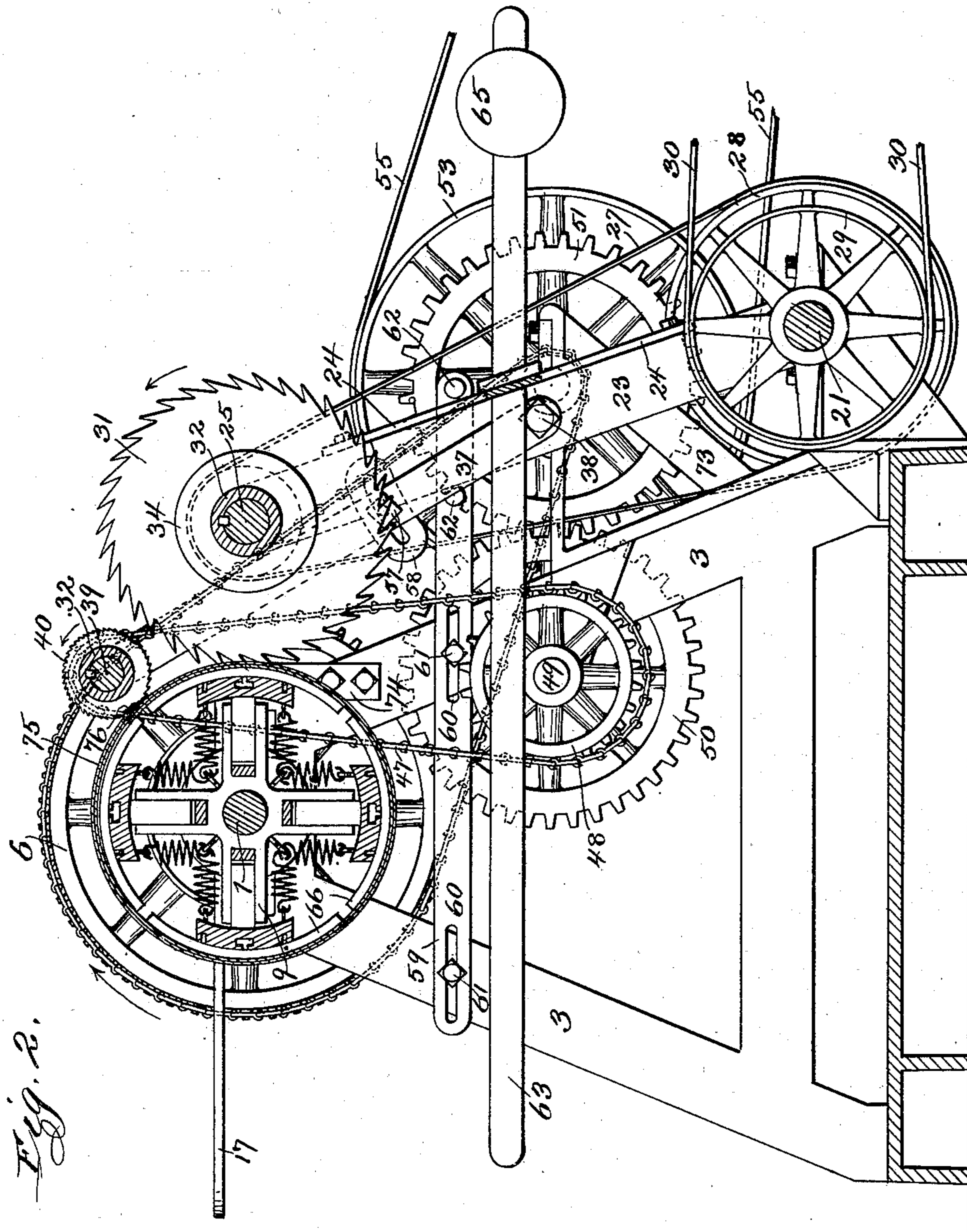
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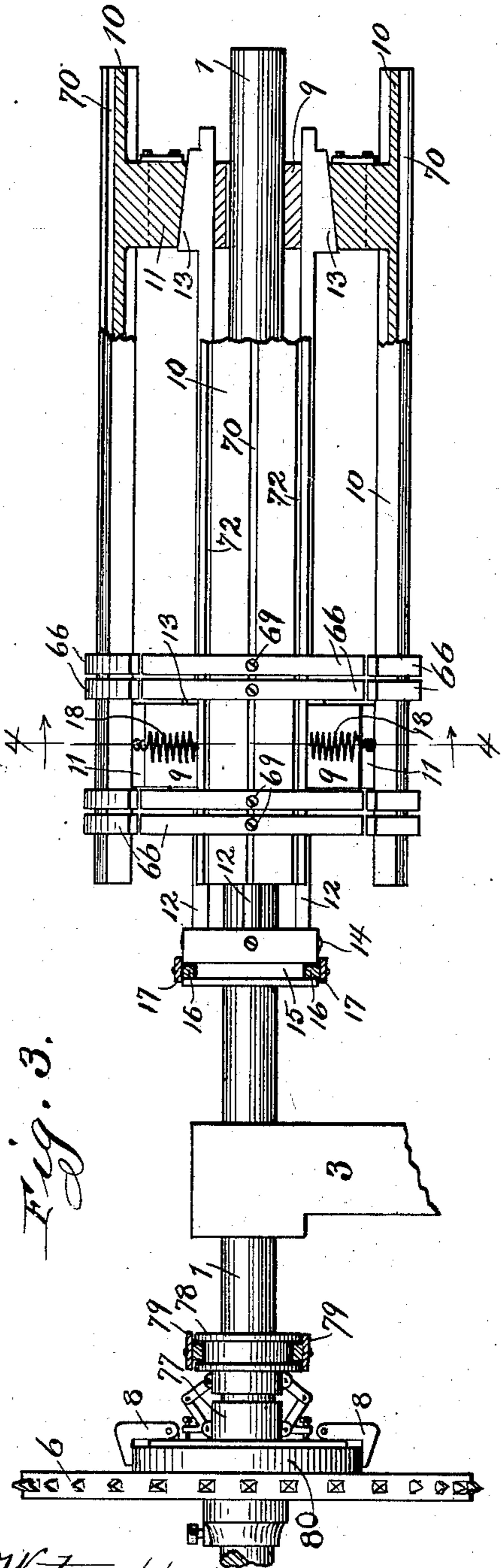


Fig. 3.

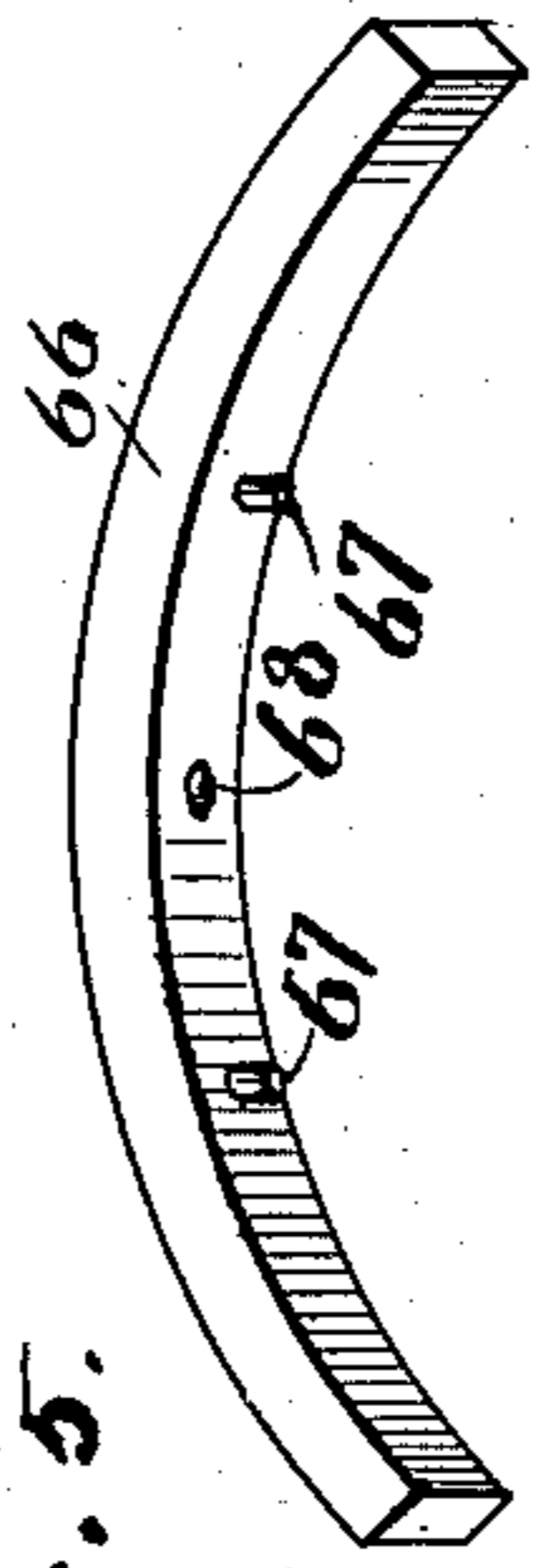


Fig. 5.

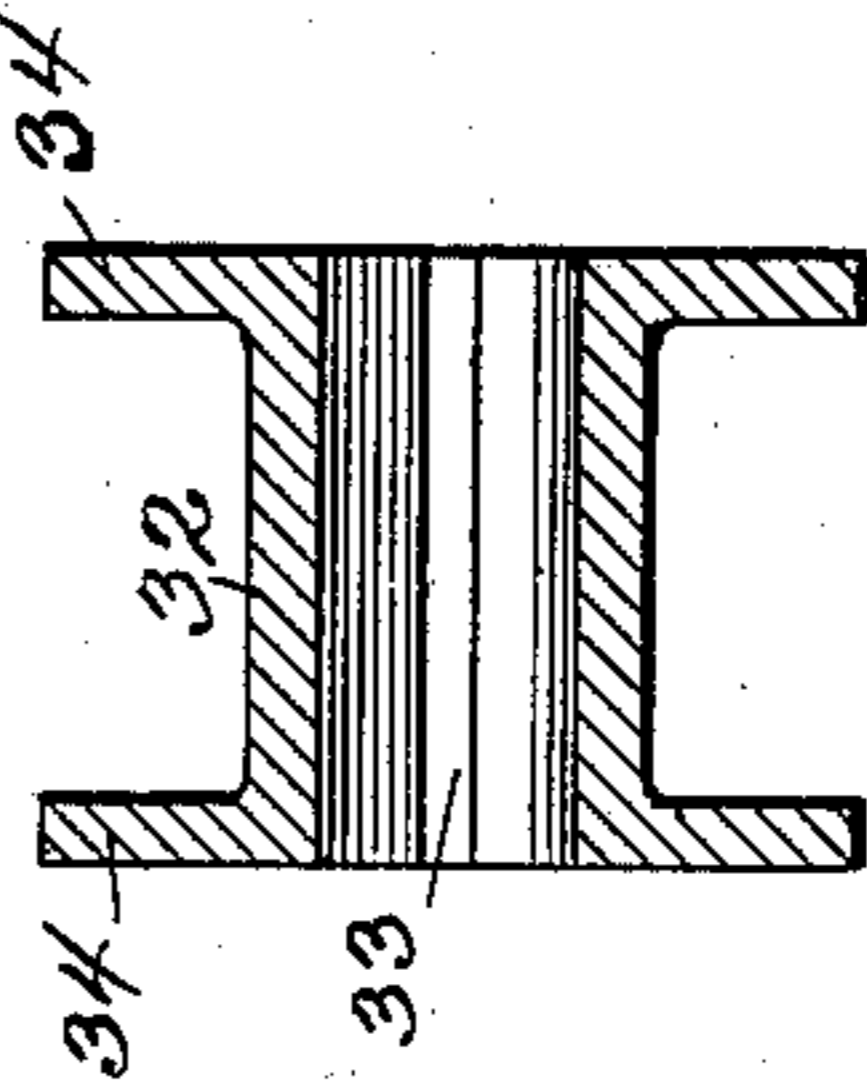


Fig. 6.

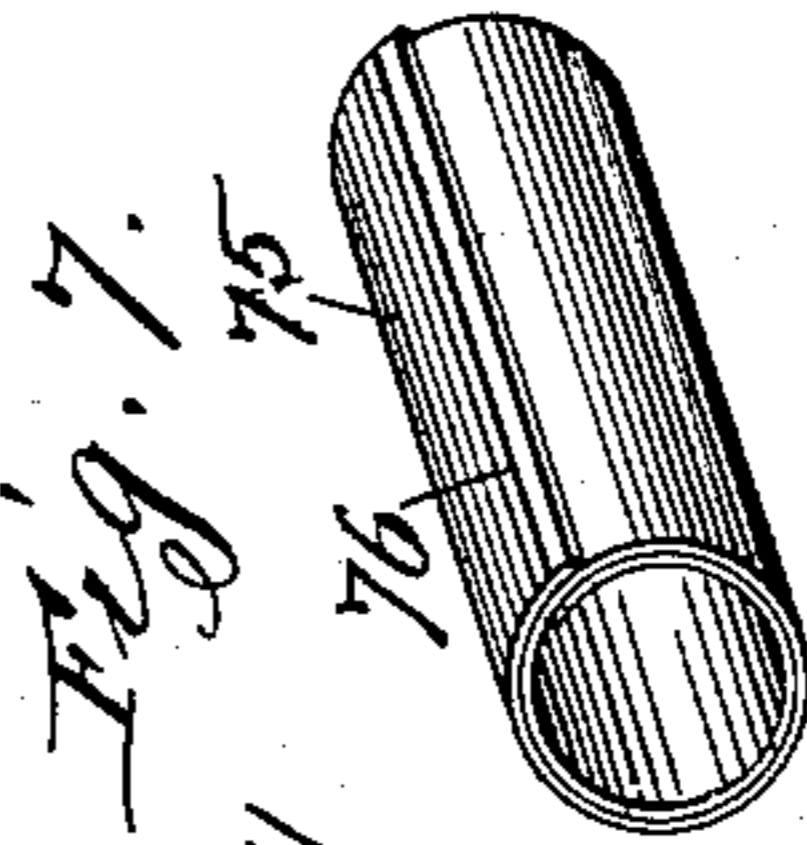


Fig. 7.

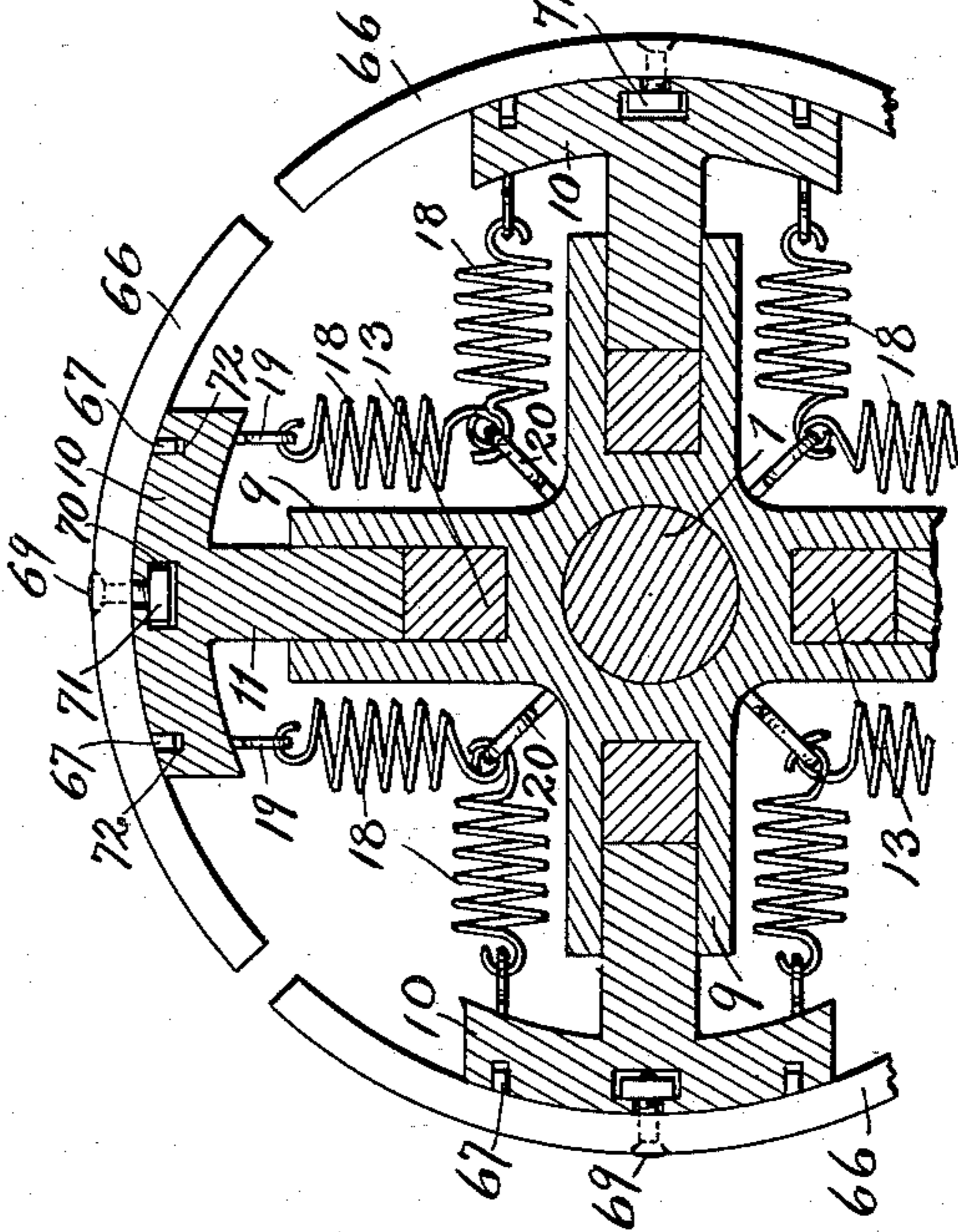


Fig. 4.

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# UNITED STATES PATENT OFFICE.

GEORGE A. GAGE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE INTERNATIONAL PACKAGE MACHINE COMPANY.

## VENEER-PACKAGE DIVIDER.

SPECIFICATION forming part of Letters Patent No. 654,724, dated July 31, 1900.

Application filed May 31, 1900. Serial No. 18,594. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. GAGE, a citizen of the United States of America, and a resident of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Veneer-Package Dividers, of which the following is a specification.

My invention relates to machines for dividing or cutting into smaller sections cylinders formed of sheets of veneering.

The main objects of my invention are, first, to provide an improved form of drum for supporting the veneer cylinder during the process of dividing same, and, second, to provide improved saws or cutting-mechanism co-acting with said drum.

The particular objects of different parts with which I put my invention into practice will be understood from the following description with reference to the accompanying drawings, in which—

Figure 1 is a rear elevation of a machine constructed according to my invention, omitting the package-supporting drum for the sake of clearness. Fig. 2 is an enlarged vertical section taken on the line 2 2 of Fig. 1, including said package-supporting drum. Fig. 3 is a front elevation of said drum and its supporting-shaft, part of said shaft and the supporting-frame being broken away. Fig. 4 is an enlarged vertical section of the drum, taken on the line 4 4 of Fig. 3 and partly broken away. Fig. 5 is a perspective view of one of the outer removable sections which are supported by the drum-segments. Fig. 6 is a longitudinal section through one of the sleeves for fastening the saws upon their supporting-shaft. Fig. 7 is a reduced perspective view of one of the veneer cylinders, showing the position of the metal fastening-strip 76 on said cylinder.

The machine shown consists mainly of a supporting-frame, a collapsible drum journaled in said frame and having one end free, a swinging frame carrying saws for cutting the body of the package, mills or metal-saws for cutting the metallic fastening-strips, and the gear for operating said drum and saws. The shaft 1 for supporting the drum is journaled in the upright 3 of the frame. The shaft 5, carrying the sprocket-wheel 6, is jour-

naled in the upright 7 of the frame and connected to the shaft 1 through the clutch 8. A pair of spiders 9 are rigidly secured to the shaft 1. The drum-segments 10 each have the inwardly-projecting arms 11, which are slidingly supported by the spiders 9. The arms 12 are provided with inclines 13, longitudinally slidable in the spiders 9 and acting against opposite inclines on the arms 11. The arms 12 are connected at their outer end to a sleeve 14, which is longitudinally slidable on the shaft 1. The sleeve 14 has a groove 15 for receiving the collar 16. Said collar is pivoted to the lever 17. Said lever is fulcrumed on the member 74 of the frame behind the parts shown in Fig. 3. The lower part of the member 74 is shown in Fig. 2. The sleeve 14 will revolve with the shaft 1, while said lever is used for moving the sleeve 14 longitudinally on said shaft. The springs 28 are attached to the eyes 19 of the segments 10 and to eyes 20 on the spiders 9. Said springs operate to normally collapse the drum by drawing the segments 10 inwardly against the action of the inclines 13.

The shaft 21 is journaled in the members 22 of the frame. A swinging frame comprising the uprights 23 and cross-piece 24 is pivoted on the shaft 21. The shaft 25 is journaled in said uprights 23. Pulleys 26 are rigid on the shaft 25 and driven by belts 27 on the pulleys 28. The pulleys 28 and a pulley 29 are rigid on the shaft 21. The shaft 21 is driven by said pulley 29 through the belt 30, connected with a main driving-shaft. (Not shown.) The saws 31 are mounted on the shaft 25 and rigidly secured thereon by means of the sleeves 32. Said sleeves are grooved at 33, as shown in Fig. 6, for being keyed to the shaft, as shown in Fig. 2. Each of said sleeves has a pair of flanges 34 for bearing against the sides of the saws. The nut 35 is threaded upon the shaft 25 and coacts with the fixed sleeve 36 in securely fastening the saws upon said shaft. An auxiliary swinging frame 37 is pivoted at 38 to the uprights 23 of the other swinging frame.

The shaft 39 is journaled in the frame 37. The mills or metal-saws 40 are secured upon the shaft 39 by means of the removable sleeves 41, fixed sleeve 42, and the nut 43. The sleeves

41 are keyed to the shaft 39 in similar manner to the sleeves 32. The bearing-plates 44 and 45 are made removable. To change the saws and mills on the shafts 25 and 39, respectively, the operator will remove said shafts from their bearings. The shaft 39 has a sprocket-wheel 46 rigidly secured thereto. A sprocket-chain 47 connects the sprocket-wheel 46 with the sprocket-wheel 48. Said chain is made loose, as shown in Fig. 2, to permit the shaft 39 and its supporting-frame to be swung toward the right of Fig. 2 when it is desired that the saws and mills be free from the veneer package. The sprocket-wheel 48 is rigid on the shaft 49. Said shaft 49 is supported in the upright 3 of the main frame. The gear-wheel 50 is rigid on the shaft 49 and meshes with the gear-wheel 51. The gear-wheel 51, sprocket-wheel 52, and pulley 53 are rigid on the shaft 54, which is journaled in the projecting arms 73 on the uprights 3 and 7 of the main frame. The pulley 53 is driven by the belt 55 through a main driving-shaft. (Not shown.) The sprocket-wheel 52 is connected by the sprocket-chain 56 with the sprocket-wheel 6.

The frame 37 is adjustable on the uprights 23 by means of bolts and nuts 57 in the slotted members 58. The arm 59 has the slots 60 therein and is longitudinally adjustable on the uprights 3 by means of the bolts and nuts 61. Said arm 59 is provided with pins 62 for limiting the swinging movement of the uprights 23. The lever 63 is adjustably secured in the cross-piece 24 by means of the set-screws 64. Said lever is provided with a weight 65 for counterbalancing the swinging frame carrying the saws.

The removable sections 66 are each provided with inner pins 67. Each of said sections has a central aperture 68 for receiving a bolt 69. Each of the segments 10 has a groove 70, which is enlarged at the inner part for receiving the nuts 71. Each of said segments also has the grooves 72 for receiving the pins 67. Said removable sections may be secured at any desired point longitudinally of the segments. The sections 66 are secured in pairs, leaving a space between same for the cutting edge of the saw. The sections 66 may be readily moved along the grooves 70 and 72 by loosening the bolt 69.

The sprocket-wheel 6 is loose on the shaft 5. The collar 77 is tight on said shaft, and the sleeve 78 is longitudinally slidable on the shaft 1 in similar manner to the sleeve 15. A lever 79 is secured upon the sleeve 78 in like manner as the lever 17 is secured upon the sleeve 15. The movement of the sleeve 78 by means of the lever 79 operates the clutch-jaws. Said jaws act upon the annular flange 80 of the sprocket-wheel 6. The lever 79 is not shown in Fig. 2, as same is located immediately behind the lever 17 in said figure. Any other well-known form of clutch may be substituted for that shown.

The operation of my device is as follows:

The veneer cylinder 75 is placed upon the drum from the right of Fig. 3, said drum having been collapsed by moving the rods 12 toward the left of Fig. 3 through the action of the lever 17. Said veneer cylinders, for which this machine is particularly adapted, have a metal strip fastened lengthwise of the cylinder, along the edge of the outer lap of veneer, as at 76 on Figs. 2 and 7. When the cylinder is in proper position on the drum, the latter will be expanded by means of the lever 17 and rods 12. The operator will now throw the clutch 8 by means of the lever 79, so as to revolve the shaft 1. He will then depress the lever 63, so as to swing the saws over against the veneer cylinder. The mills 40 will first cut through the metal strip at 76 on the veneer cylinder. The saws 31, following said mills, will cut through the veneering between each pair of the removable sections 66 on the drum. The relative positions of the mills and saws transversely of the drum will be fixed by adjusting the auxiliary frame 37 on the swinging uprights 23. The loose chain 48 will permit the operator to throw back the frame supporting the saws by raising the lever 63. The revolution of the drum is now stopped by throwing off the clutch 8, and the drum is collapsed by means of the lever 17. The sections of the veneer cylinder as divided by the saws will then be removed from the free end of the drum. To make packages of different lengths, the operator will remove the belt 27 from the pulley 26 and remove the bearing-plates 44. The shaft 25 may then be lifted from its bearings and the sleeve 32 and saws 31 may be removed. The operator will then replace said saws with sleeves 32 of the desired width. New sleeves will also be substituted on the shaft 39. The operator will now loosen the bolts 69 and place the sections 66 in the proper position with respect to the saws and mills.

It will be understood that the device shown may be altered in numerous ways without departing from the spirit of my invention. I therefore do not confine myself to the details shown, except as hereinafter limited in the claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A veneer-package divider comprising a supporting-frame; a rotary collapsible drum journaled therein; a series of cutters acting toward the periphery of said drum; a plurality of segmental sections secured upon said periphery adjustable longitudinally of the drum and projecting inward of the edges of said cutters; and means for operating said drum and cutters; substantially as described.

2. A veneer-package divider comprising a supporting-frame; a rotary collapsible drum journaled therein; a series of cutters acting toward the periphery of said drum; a plurality of segmental sections secured upon said periphery, adjustable longitudinally of the drum and projecting inward of the edges of

said cutters; and means for operating said drum and cutters; said drum having a plurality of grooves extending longitudinal of same, and said segmental sections having projections seated in said grooves; substantially as described.

3. A veneer-package divider comprising a supporting-frame; a rotary collapsible drum journaled therein; a series of cutters acting toward the periphery of said drum; a plurality of segmental sections secured upon said periphery, adjustable longitudinally of the drum and projecting inward of the edges of said cutters; and means for operating said drum and cutters; said drum having extending longitudinal of same, grooves enlarged toward the inner part, and said segmental sections each having a bolt engaging with a nut seated in one of said grooves; substantially as described.

4. A veneer-package divider comprising a supporting-frame; a rotary collapsible drum journaled therein; a swinging frame having a series of rotary saws carried thereby to and from the periphery of said drum and adjustable opposite different parts of said periphery; a plurality of segmental sections secured upon said periphery, adjustable longitudinally of the drum and projecting inward of the edges of said saws; and means for operating said drum and saws; substantially as described.

5. A veneer-package divider comprising a supporting-frame; a rotary collapsible drum

journaled therein; a swinging frame having a shaft journaled therein and a series of rotary saws carried thereby to and from the periphery of said drum and adjustable opposite different parts of said periphery; a series of removable sleeves mounted on said shaft for separating the saws; a plurality of segmental sections secured upon said periphery, adjustable longitudinally of the drum and projecting inward of the edges of said saws; and means for operating said drum and saws; substantially as described.

6. A veneer-package divider comprising a supporting-frame; a rotary collapsible drum journaled therein; a swinging frame having a series of rotary saws carried thereby to and from the periphery of said drum and adjustable opposite different parts of said periphery; an auxiliary frame adjustable on said swinging frame and carrying a series of mills or metal-saws adjustable opposite said other saws; a plurality of segmental sections secured upon said periphery, adjustable longitudinally of the drum and projecting inward of the edges of said saws and mills; and means for operating said drum, and said saws and mills; substantially as described.

Signed at Chicago, Illinois, this 12th day of May, 1900.

GEORGE A. GAGE.

Witnesses:

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J. H. DAVIS.